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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,802

09/07/2004

Katsuya Watanabe

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04/29/2008

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EXAMINER

LIAO, DIANA J

ART UNIT

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1793

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,802	Applicant(s) WATANABE ET AL.	
	Examiner DIANA J. LIAO	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/7/04 and 11/19/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 3 and 4 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/4/2008.
2. Applicant's election without traverse of group I, claims 1 and 2 in the reply filed on 4/4/2008 is acknowledged.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. JP 2002-63395, filed on 3/8/2002.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 9/7/04 and 11/19/07 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Status of Application

5. Claims 1 and 2 are presented for examination. Claims 3 and 4 are withdrawn.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kimura, et al. (JP 2001-353444).

Claim 1 recites a process for producing a catalyst for hydrodesulfurization and isomerization, comprising supporting palladium on a composition comprising a platinum-supported sulfated zirconia and alumina.

Kimura '444 teaches a catalyst used for desulfurization. (para. 1) The catalyst composition contains a zirconium oxide, an alumina, a sulfate ingredient, palladium and optionally another metal such as platinum. (para. 9-10) The catalyst can be made by several different methods, including method (4), making the sulfated-zirconia, mixing in the alumina, drying and calcining and then impregnating palladium (para. 24) The second metal, such as platinum, may be added at any stage before the calcination step. (para. 25) The metals may be introduced during the kneading step when the sulfate ingredient is added to the zirconia. (para. 36) In addition to desulfurization, Kimura '444 discloses that a platinum metal with sulfated-zirconia had high isomerization performance.

Therefore, Kimura '444 teaches with sufficient specificity a catalyst created by creating a platinum, zirconia, and alumina support and then supporting palladium onto that support. Claim 1 is anticipated by the prior art.

Claim Rejections - 35 USC § 103

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura, et al. (JP 2001-353444) optionally in view of Matsuzawa (US 6,107,235).

Kimura '444 teaches the process as described above for making a catalyst. Zirconium hydroxide is sulfated, possibly with platinum as discussed earlier, and then an inorganic oxide such as alumina is added. The alumina precursor may be aluminum hydroxide, boehmite, or quasi-boehmite. (para. 33)

The process order of first combining platinum and zirconia before adding alumina is mentioned as an option for creating the catalyst support in Kimura '444. The metal may be added at the time of kneading with the sulfate source. (para. 36) Given that Kimura '444 teaches the addition of platinum into the sulfated zirconia before alumina addition as a viable possibility, the order of process steps as claimed is not found patentable. Generally a change in process step sequence or adding ingredients is not found patentable over the prior art and is a *prima facie* case of obviousness.

Kimura '444 does not teach the process step order of supporting platinum first onto the sulfated-zirconia and then mixing the alumina, nor does it teach the use of pseudoboehmite.

The use of pseudoboehmite would be obvious to one of ordinary skill in the art given the teaching of alumina and other boehmite materials. The use of another type of alumina is found to be an obvious alternative and not patentable over the prior art.

Alternatively, Matsuzawa '235 teaches the specific use of pseudoboehmite alumina for the stabilization of zirconia. (col 2, lines 40-42) Matsuzawa '235 also teaches that aluminum oxide hydrates of boehmite structure in general are suitable. (col 3, lines 24-27) The catalyst composition made by Matsuzawa '235 is for isomerization of hydrocarbons. (abstract) One would be motivated to use the teachings of Matsuzawa '235 because it teaches that alumina is an effective stabilizer for zirconia because it does not interfere with its acidic nature and that pseudoboehmite gives the composition excellent shapability. (col 2, lines 56-65)

Therefore, claim 2 is not found patentable over the prior art.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

Art Unit: 1793

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1 and 2 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 6,737,380 in view of Matsuzawa (US 6,107,235). Claim 4 of US 6,737,380 differ from the instant claims because it does not include a palladium loading step after the creation of a support comprising zirconia, a group VIII metal, and alumina and calcining. However, Matsuzawa '235 teaches that loading a group 8, 9, or 10 metal after the creation of a support of zirconia and alumina is known in the art. (claim 1) One would be motivated to combine these references because they are both solid acid catalysts for use in isomerization. (see abstracts) The addition of a metal after creating the support would increase catalytic ability. Therefore the instant claims are not found to be patentably distinct from those of US 6,737,380 in view of Matsuzawa '235.

Conclusion

Claims 1 and 2 have been rejected. No claims have been allowed. Claims 3 and 4 have been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIANA J. LIAO whose telephone number is (571)270-

Art Unit: 1793

3592. The examiner can normally be reached on Monday - Friday 8:00am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ngoc-Yen M. Nguyen/
Primary Examiner, Art Unit 1793

DJL